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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/608,449	06/30/2003	Shiqin Xiong	NTD-2	7138

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EXAMINER

HAMUD, FOZIA M

ART UNIT PAPER NUMBER

1647

DATE MAILED: 01/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/608,449

Applicant(s)

XIONG ET AL.

Examiner

Fozia M. Hamud

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1647

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 05 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-3,5,7-9 and 17-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-2, 7-9, 17-19, 21-24 is/are rejected.
- 7) ☐ Claim(s) 3,5 and 20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**Response to Amendment**

1a. Receipt of Applicants' amendment and arguments, filed on 05 October 2005 is acknowledged.

***Status of Claims:***

1b. Claims 4, 6 and 10-16 have been cancelled, new claims 17-24 have been added. Thus, claims 1-3, 5, 7-9 and 17-24 are pending and under consideration.

1c. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. The following previous objections and rejections are withdrawn in light of Applicants' amendment filed 10/05/05.

(I) All the rejections made against cancelled claims 4 and 6 are moot.

(II) The rejection of claim 8 made under 35 U.S.C. 101, for being drawn to a non-statutory subject matter is withdrawn, because claim 8 is now drawn to "an isolated host cell".

(III) The rejection of claims 1-3, 7-9 made under 35 U.S.C. § 112, first paragraph, for not enabling the full scope of the claimed invention is withdrawn, because the claims now recite a specific activity for the polypeptide of the instant invention. Accordingly, the skilled artisan can select sequences that code for a polypeptide having the recited activity.

(IV) The rejection of claims 1-3, 5, 7-9 made under 35 U.S.C. 112, second paragraph, is withdrawn, because the indefinite limitations have been deleted.

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(V) The rejection of claims 1, 2 and 7-9 are rejected under 35 U.S.C §102(b) as being anticipated by Wiemann et al, database GenEmbl. Accession Number: AX086664, 09 March 2001; WO0112659), is withdrawn, because the instant claims 1, 2, and 7-9 no longer recite an isolated polynucleotide encoding the polypeptide of SEQ ID NO:4. Therefore, the Wiemann et al reference does not teach the subject matter recited in instant claims 1-2 and 7-9.

***Response to Applicants' arguments:***

***Specification:***

3. The title of the invention is still not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

***Claim Rejections under 35 U.S.C. §112:***

4a. Claims 1-2, 7-9 stand rejected and new claims 18-19, 21-24 are rejected under 35 U.S.C. 112, first paragraph for not satisfying the written description requirements as set forth in the office action mailed on 07 July 2005.

Applicants argue that all coding sequences for the polypeptide of SEQ ID NO:2 can be claimed, because of the state of the art of the basic molecular biology.

Applicants cite Example 11 of the PTO written description guidelines wherein a claims drawn to a genus of DNAs that encode a specific amino acid sequence. Applicants argue that although only one species within the genus is disclosed, the skilled artisan could readily envision all the DNAs degenerate to the disclosed sequence. Applicants argue that the specification provides information about the structural features and activities of the polypeptides of the instant invention.

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These arguments have been considered fully. Firstly, Applicants are correct in that all the DNAs that encode the polypeptide of SEQ ID NO:2 can be claimed. However, the claims are drawn to isolated polynucleotides encoding a polypeptide which is at least 90%, 95% or 97% identity to the polypeptide of SEQ ID NO:2 and an isolated nucleic acid which hybridize to a nucleic acid encoding a specific polypeptide. Therefore, the instant specification only describes the structure of the nucleic acid of SEQ ID NO:1 encoding the polypeptide of SEQ ID NO:2, and therefore, conception is not achieved until reduction to practice has occurred. Therefore, the specification does not describe nucleic acids encoding polypeptides that are at least 90%, 95% or 97% identity to the polypeptide of SEQ ID NO:2 or which hybridize to said nucleic acid. Secondly, the specification describes the structure of the polypeptide of the instant invention, for example, the polypeptide of the instant invention comprises a signal sequence, an extracellular domain, a transmembrane, etc. However, the specification does not describe the structure of a nucleic acid that encodes a polypeptide that shares the recited percent identity to the polypeptide of SEQ ID NO:2, that retains the desired activity. The only factor present in the claims is a partial structure in the form of a recitation of percent identity or hybridizing language. There is not even identification of any particular portion of the structure that must be conserved. Accordingly, in the absence of sufficient recitation of distinguishing identifying characteristics, the specification does not provide adequate written description of the claimed genus.

**New Rejections Necessitated by Applicants' Amendment:**

**Claim Objections:**

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5. Claims 3, 5 and 20 are objected to because of the following informalities: these claims depend from rejected claim 1. Appropriate correction is required.

***Claim Rejections Under 35 U.S.C. § 102:***

6. Claim 24 is rejected under 35 U.S.C §102(b) as being anticipated by Bloecker et al, database GenEmbl. Accession Number: AL133097, 18 February 2000) and Jing, S. database GenEmbl. Accession Number: AX251723, 05 October 2001). Each of Bloecker et al and Jing, S, reference discloses an isolated nucleic acid that shares 86.2% and 63%, (respectively), nucleotide sequence identity to the nucleic acid of SEQ ID NO:1 of the instant invention, (see copies of the comparison of SEQ ID NO:1, claimed in the instant invention and the sequences of the references (SEQUENCE COMPARISON 'B' and "C").

Instant claim 24 is drawn to an isolated polynucleotide encoding the polypeptide of amino acid residues 1-144 of SEQ ID NO:2, or a fragment of it comprising at least 24 nucleotides.

Therefore, the Bloecker et al, and Jing, S references meet the fragment limitation recited in the claim. Thus, these references anticipate the instant claim 24, in the absence of any evidence to the contrary.

***Conclusion:***

7. No claim is allowed. Claims 3, 5 and 20, would be allowable if rewritten to overcome the rejection under 35 U.S.C. 112, first paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

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Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

***Advisory Information:***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fozia M. Hamud whose telephone number is (571) 272-0884. The examiner can normally be reached on Monday, Thursday-Friday, 6:00 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brenda G. Brumback can be reached on (571) 272-0961. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Fozia Hamud  
Patent Examiner  
Art Unit 1647  
18 December 2005

A handwritten signature in cursive script, reading "Eileen B. O'Hara".

**EILEEN B. O'HARA  
PATENT EXAMINER**